

REMARKS

In the specification, Applicants submit a readable floppy computer disk (1.5MB format) along with a separate print out of the Sequence Listing, pursuant to 37 C.F.R. §§1.821-1.825. The nucleotide sequence listing in written and computer readable form comply with the standard provided for in 37 CFR 1.822.

I hereby state that the information recorded in computer readable form is identical to the written Sequence Listing.

I hereby state that the submission, filed in accordance with 37 CFR § 1.821(g), herein does not include new matter.

Since any reference to the sequence listings should be numbered appropriately in the specification, Applicant has amended the paragraph beginning on line 16, page 77 to rectify errors related to the mention of the sequence identification numbers.

The paragraphs beginning on line 17, page 117; on line 5, page 119; on line 21, page 120; and on line 21, page 121 have been amended to correct minor editorial problems. The schemes in the new paragraphs depict methods for synthesizing derivatives of β -L-deoxyribonucleosides. Support for the amended schemes can be found within their respective paragraphs and in the section entitled "VIII. Preparation of the Active Compounds" on pages 115-122 and Examples 1-15 of the specification.

Similarly, Figures 1-6 have been amended. Previously omitted Figure 1a has been added. Support for this Figure can be found on page 34, lines 1-6, and on page 119, lines 5-9 (see Scheme 2). Figures 1b and 2-6 have been amended such that the 2'-deoxy- β -L-cytidine has a 2'-deoxyribose sugar moiety. Support for these amended figures can be found within the section entitled "VIII. Preparation of the Active Compounds" on pages 115-122 and Examples 1-15 of the specification.

Further, Figure 16 has been amended such that the measurements of the numbers, letters and reference characters are now in compliance with 37 CFR 1.84 and 37 CFR 1.121.

U.S. Patent Application No. 10/662,641
Response to Missing Parts

Applicants believe a fee of \$ 130.00 is due, the Commissioner is authorized to charge this and any other deficiencies or credit any overpayment to Deposit Account No. 11-0980.

Respectfully submitted,

A handwritten signature in black ink, appearing to read "Brent R. Bellows", with a long horizontal flourish extending to the right.

Brent R. Bellows
Registration No. 54,709

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February 4, 2004

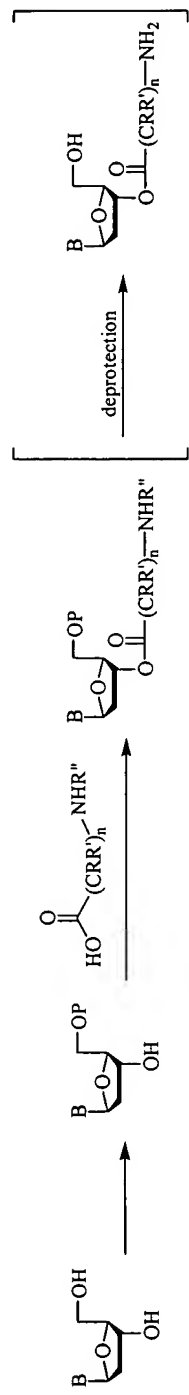


Figure 1a Synthesis of 3'-valinyl esters of 2'-deoxy- β -L-cytidine

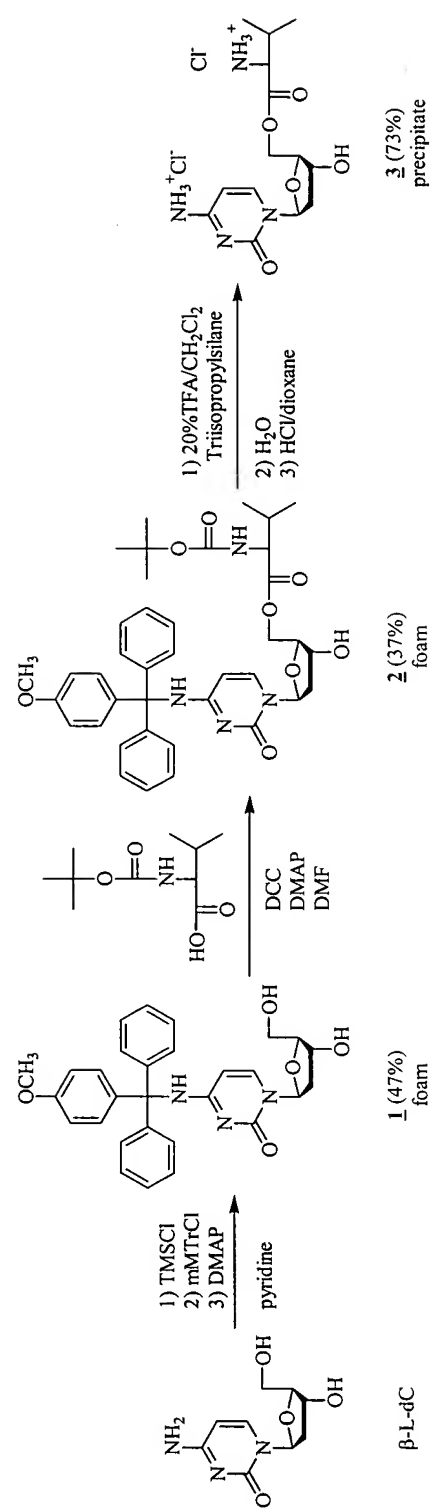


Figure 1b Synthesis of 5'-valinyl esters of 2'-deoxy- β -L-cytidine

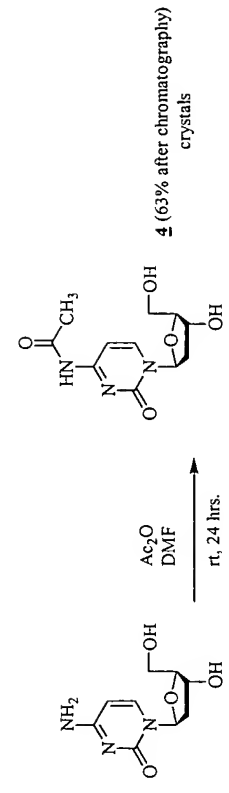


Figure 2 Synthesis of N' -acetyl-2'-deoxy- β -L-cytidine

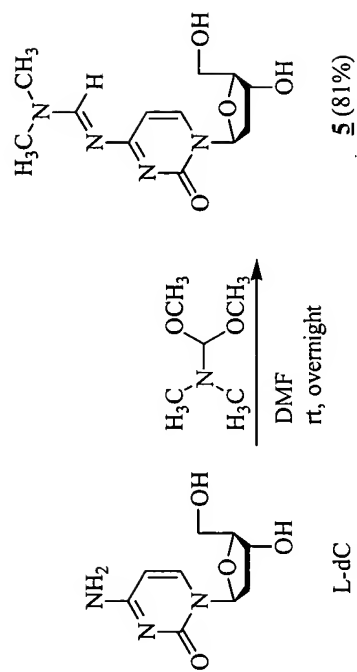


Figure 3 Synthesis of *N'*-[(dimethylamino)methylene]-2'-deoxy-β-L-cytidine

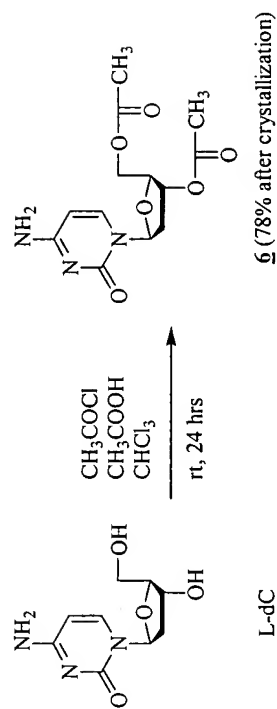


Figure 4 Synthesis of 3',5'-di-*O*-acetyl-2'-deoxy-β-L-cytidine

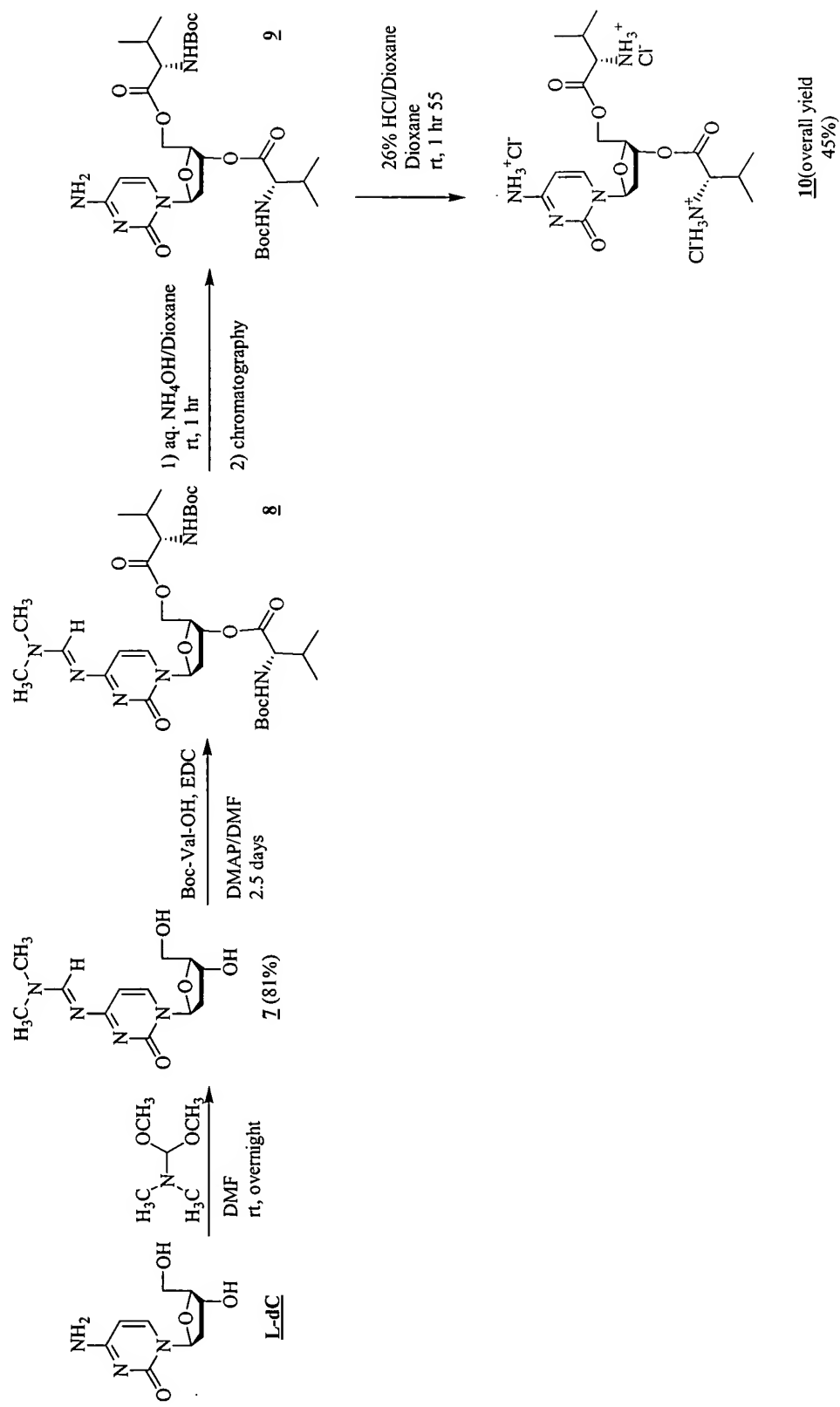


Figure 5 Synthesis of 3',5'-di-*O*-valinyl esters of 2'-deoxy β-L-cytidine

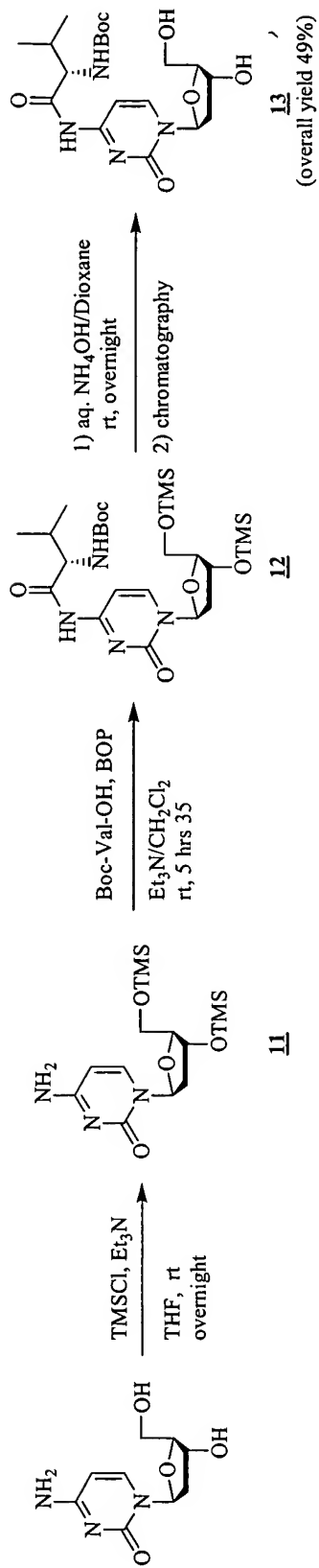


Figure 6 Synthesis of *N*⁴-Boc-valinyl ester of 2'-deoxy-β-L-cytidine

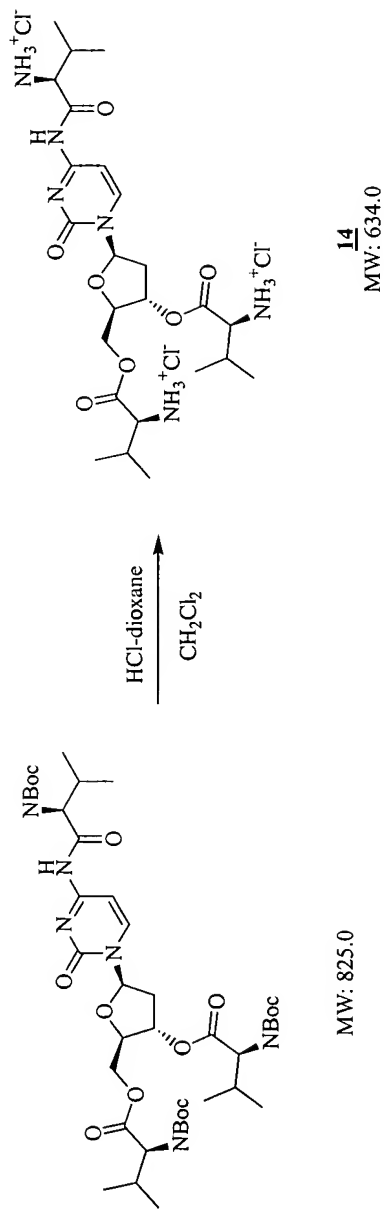
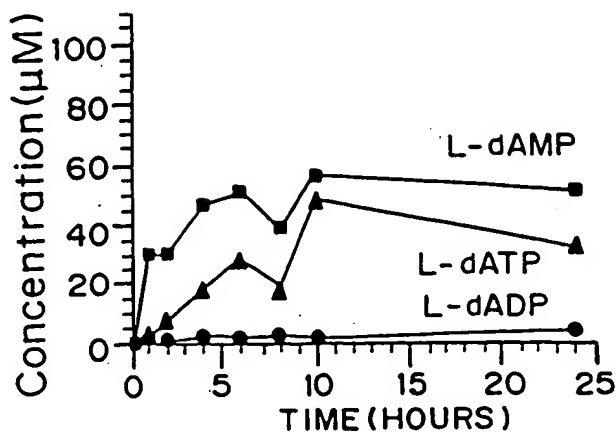


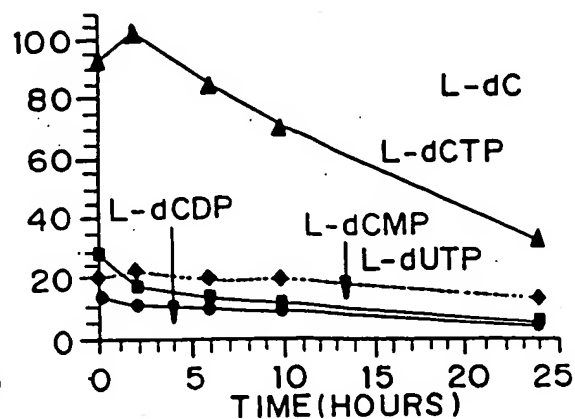
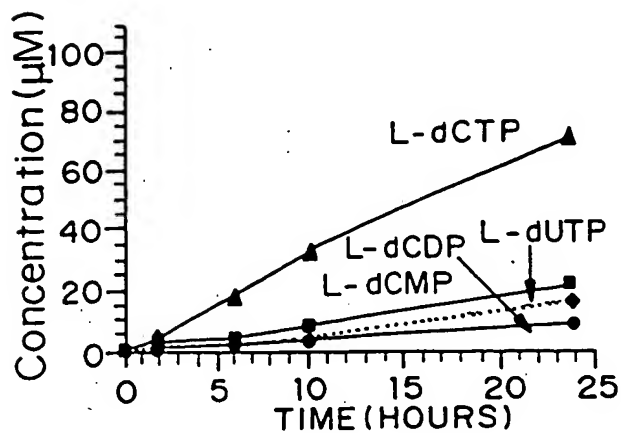
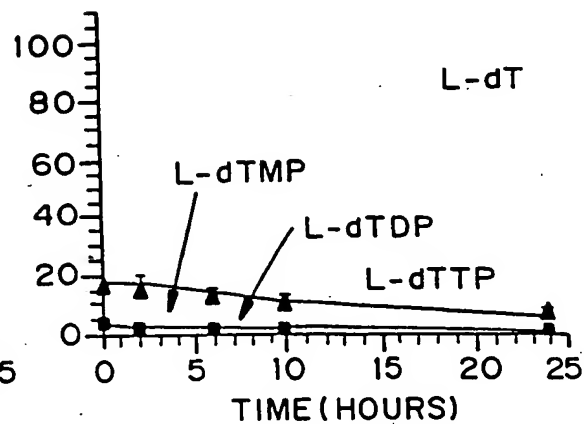
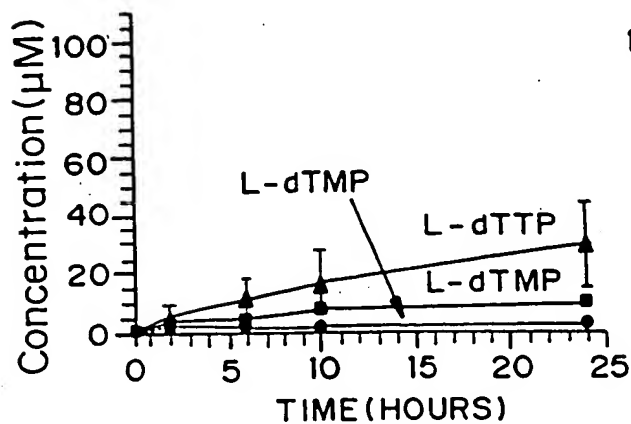
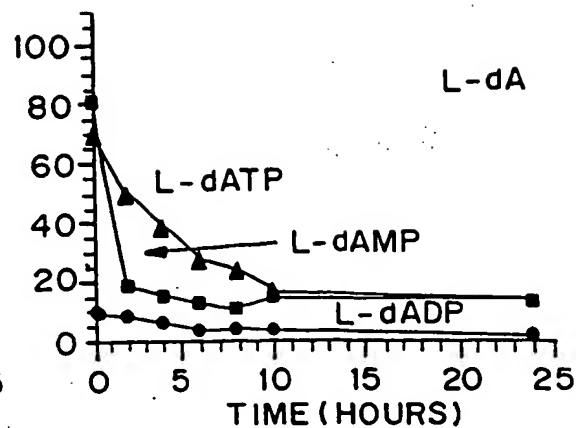
Figure 7 Synthesis of 3',5',*N*⁴-tri-(L-valinyl)-L-2'-deoxycytidine



FIGURE 16
ACCUMULATION



DECAY



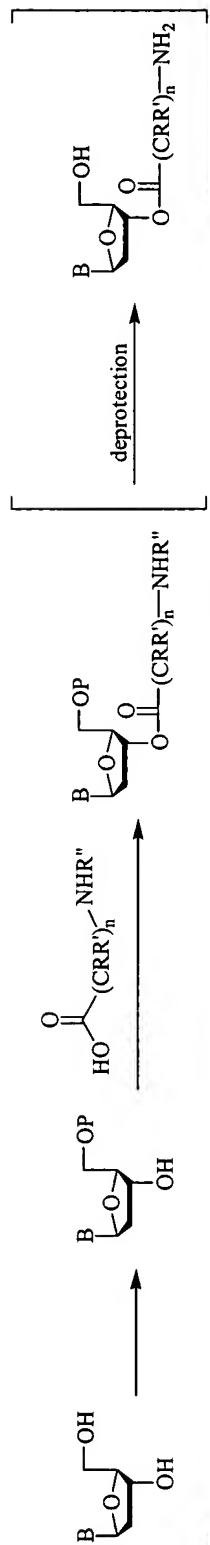


Figure 1a . Synthesis of 3'-valinyl esters of 2'-deoxy- β -L-cytidine

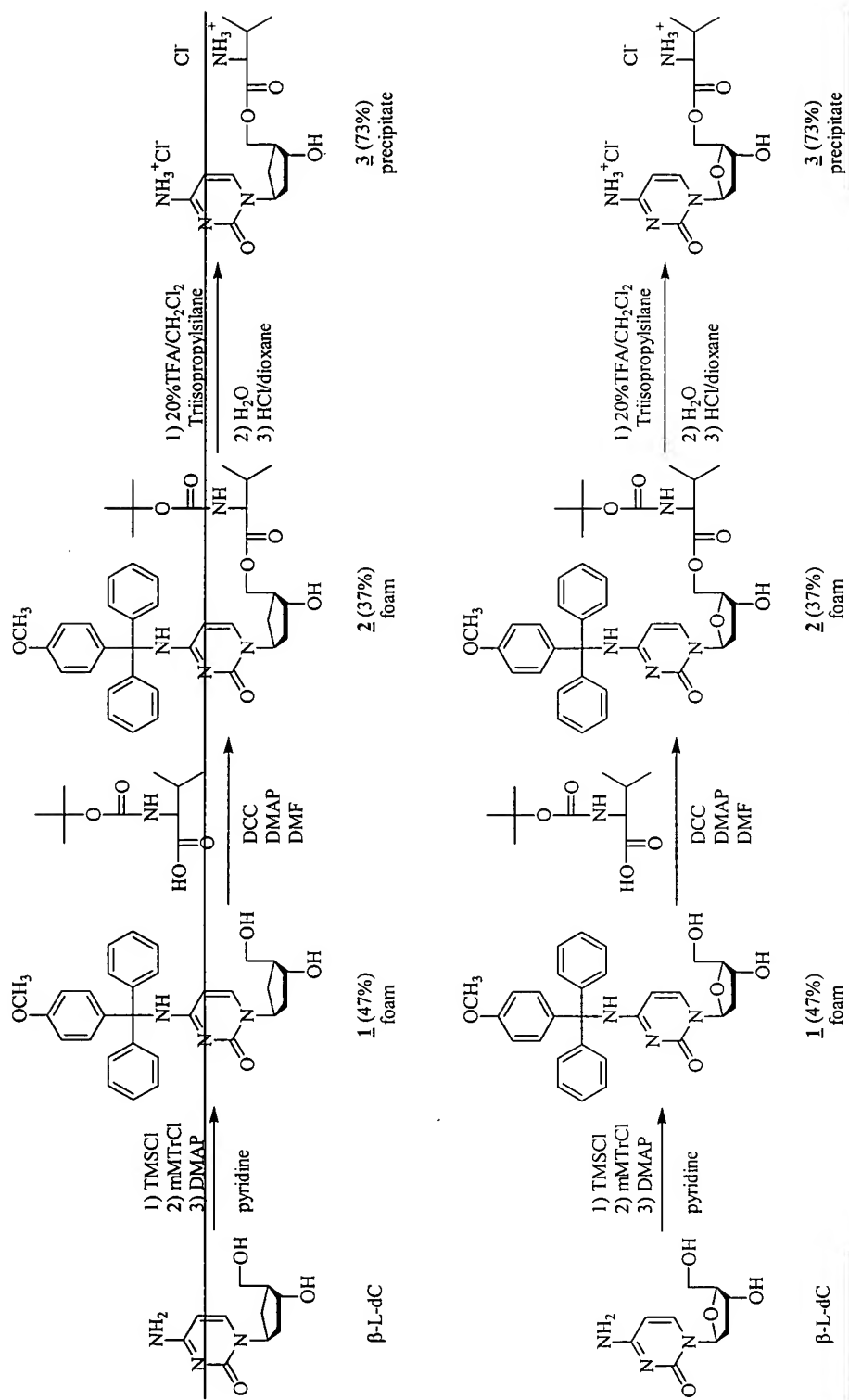


Figure 1b Synthesis of 5'-valinyl esters of 2'-deoxy-β-L-cytidine

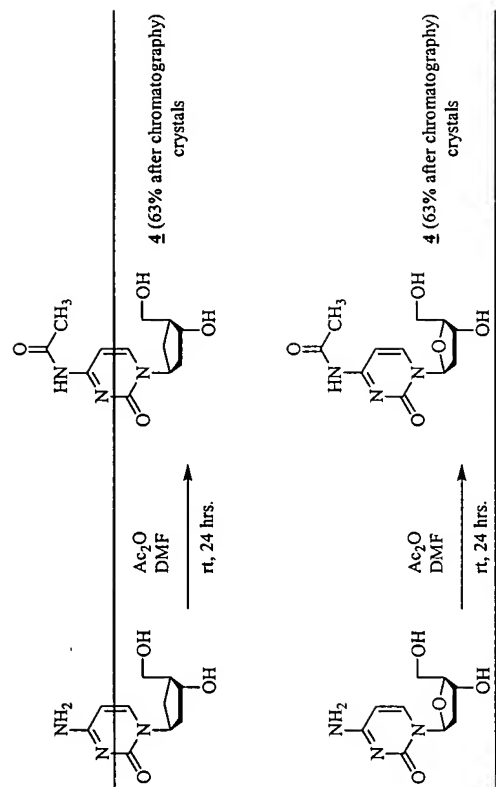


Figure 2 Synthesis of *N*⁴-acetyl-2'-deoxy-β-L-cytidine

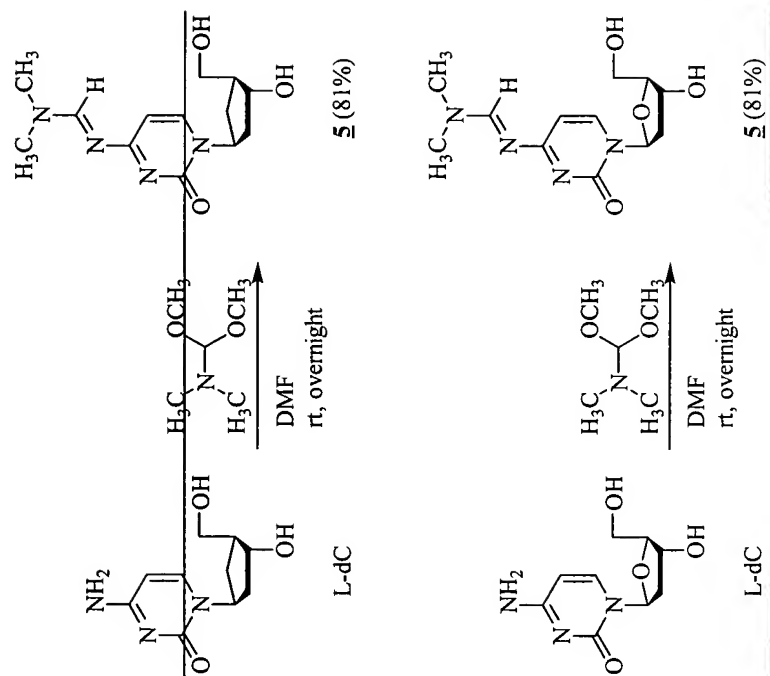


Figure 3 Synthesis of *N*⁴ -[(dimethylamino)methylene]-2'-deoxy-β-L-cytidine

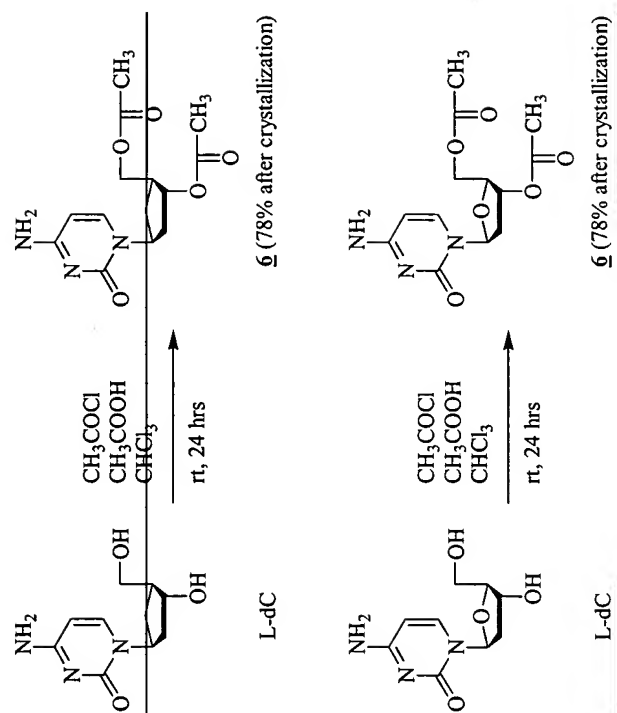
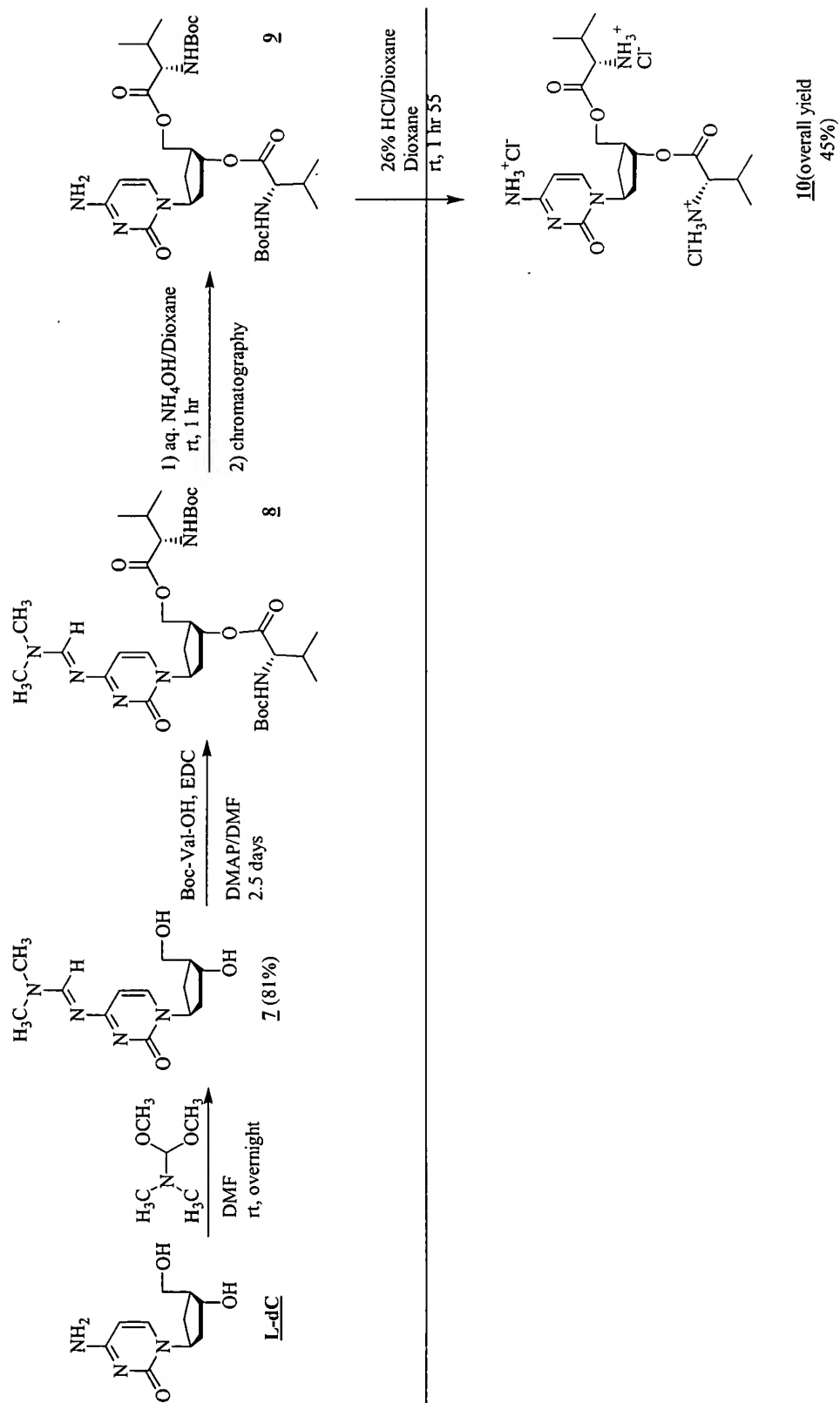


Figure 4 Synthesis of 3',5'-di-*O*-acetyl-2'-deoxy- β -L-cytidine



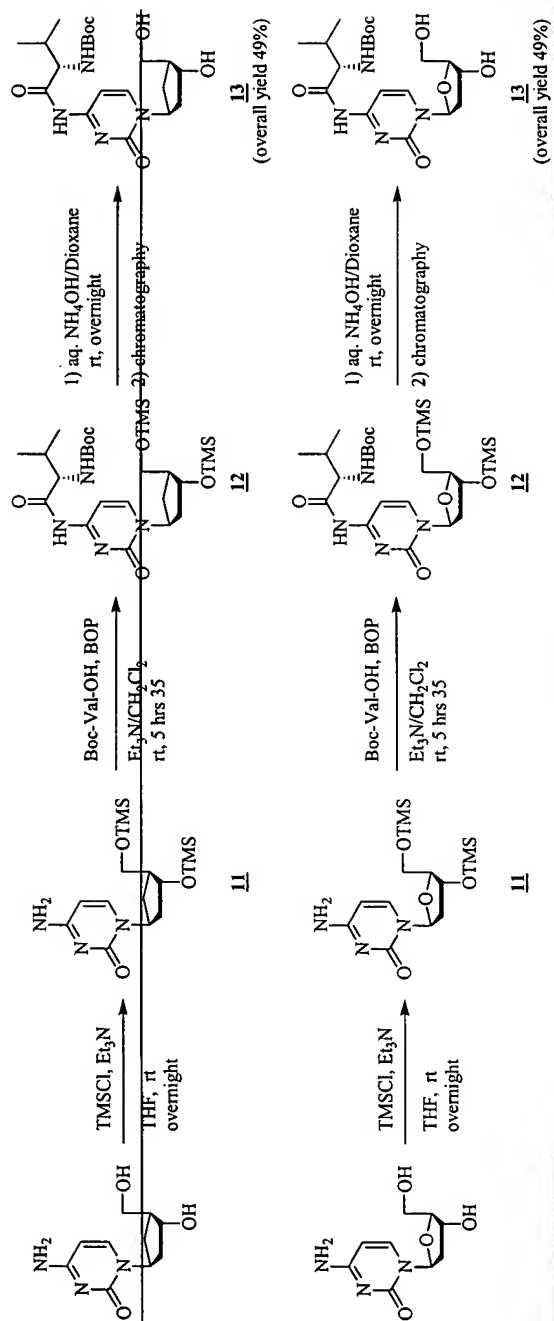
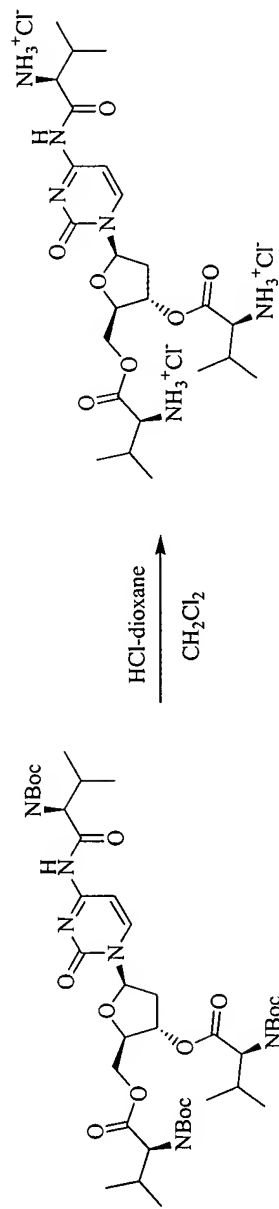


Figure 6 Synthesis of *N'*-Boc-valinyl ester of 2'-deoxy- β -L-cytidine



MW: 825.0

14
MW: 634.0

Figure 7 Synthesis of 3',5',*N'*-tri-(L-valinyl)-L-2'-deoxycytidine

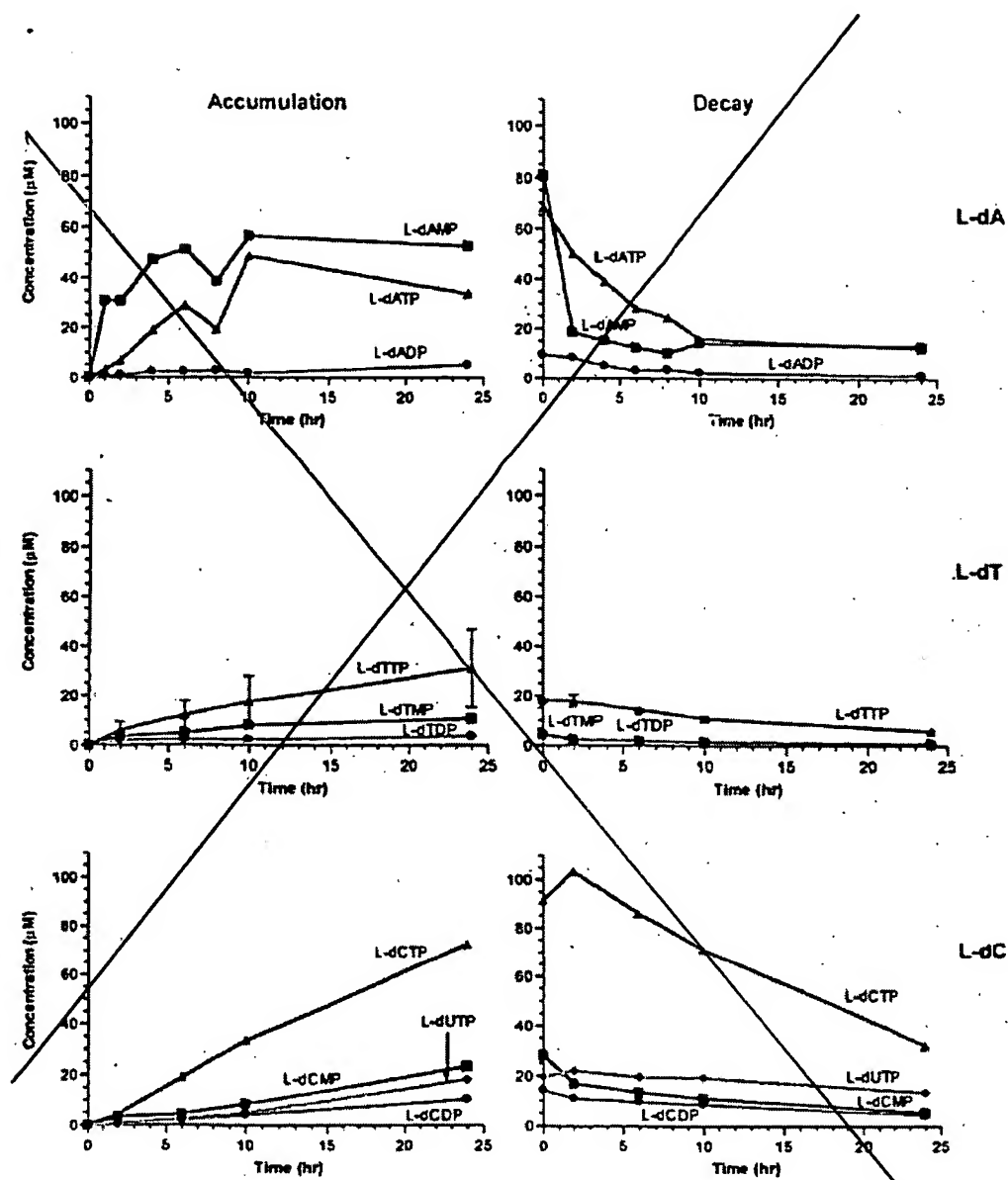


Figure 16 Accumulation and Decay of L-dA, L-dT, and L-dC in HepG2 Cells